

Appl. No. : 10/042,775
Filed : January 8, 2002
Response to : Office Action dated March 4, 2004

REMARKS

The Applicants have amended Claims 1, 10, 23, and 27, added Claims 28-31, and cancelled Claims 3, 6, 7, and 9. Thus, Claims 1-2, 5, 10-19, 21, and 23-31 are presented for examination.

The specific changes to the amended claims are shown above in the Amendments to the Claims, wherein the insertions are underlined and the ~~deletions are stricken through~~. The Applicants respond below to rejections and objections raised by the Examiner in the Office Action of March 4, 2004.

I. Interview Summary:

A telephonic interview was conducted on Thursday, May 20, 2004. The participants in the Interview were Examiners Gerry Leffers and Maria Marvich on behalf of the Patent Office, and attorneys Mike Fuller and Erik Anderson on behalf of the Applicants. During the Interview, the participants discussed adding the L3 limitation of allowable Claim 9 to Claim 1. The participants also discussed the inclusion of a vaccinia viral vector limitation in Claim 23.

II. Allowable Claims

The Applicants thank the Examiner for allowing Claims 17-19 and 21, as reported on page 12 of the March 4, 2004 Office Action. The Applicants also thank the Examiner for noting the allowability of Claim 9 if rewritten in independent form. The Applicants respectfully submit that Claim 1 now includes all the limitations of Claim 9.

III. New Claims

The Applicants have added new Claims 28-31 directed to various limitations on the quantity of substantially purified ATM protein that is produced by the claimed method. Support for these claims may be found in part at page 11, lines 23 to 25 of the specification.

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IV. Rejections under 35 U.S.C. § 112

Claims 3 and 7 stand rejected under 35 U.S.C. § 112, first paragraph as allegedly failing to comply with the written description requirement. Claim 3 has also been rejected under 35 U.S.C. § 112, second paragraph as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Applicants respectfully disagree, however solely in order to advance prosecution of the application, Claims 3 and 7 have been cancelled.

The Applicants respectfully submit that in view of the cancellation of Claims 3 and 7 the § 112 rejections are now moot. Accordingly, the Applicants respectfully request withdrawal of these rejections.

V. Rejections under 35 U.S.C. § 103

Claims 1-2, 6, 10, 12-13, 14-16, and 23-27 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Kastan *et al.* (US 6,337,640 B1) in view of Rappold *et al.* (JCB Vol. 153(3), pp. 613-620). The Applicants respectfully disagree, and argue that these claims are not rendered obvious by the prior art of record.

To establish a *prima facie* case of obviousness a three-prong test must be met. First, there must be some suggestion or motivation, either in the references or in the knowledge generally available among those of ordinary skill in the art, to modify the reference. Second, there must be a reasonable expectation of success found in the prior art. Third, the prior art must teach or suggest all the claim limitations. *In re Vaeck*, 947 F.2d 488 (Fed. Cir. 1991).

With respect to Claim 1 and its dependent claims, the Applicants submit that the L3 limitation of allowable Claim 9 has been added to Claim 1. Accordingly, Claim 1 and all of its dependent claims are allowable for at least the same reasons.

With respect to Claim 23 and its dependent claims, the Applicants respectfully submit that Claim 23 relates to method for producing recombinant ATM protein in a vaccinia viral vector, wherein "said functional ATM protein is produced at a level of greater than 2 µg substantially purified ATM protein per 8 x 10⁶ host cells". Support for this claim may be found in part at page 11, lines 23 to 25. This level of ATM production has not been reported in the cited prior art.

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While the primary reference, Kastan *et al.*, contemplates the use of a vaccinia viral vector in a recombinant expression system, it does not report high yield ATM production or the isolation and purification of such ATM. This deficiency is not overcome by Rappold *et al.* which similarly does not teach such ATM yields. In particular, there is no teaching in either reference of a vaccinia viral based system for recombinantly producing ATM protein at a level of greater than 2 μg substantially purified ATM protein per 8×10^6 host cells, as recited in Claim 23.

For these reasons, the combination of Kastan *et al.* and Rappold *et al.* does not teach each and every limitation of the claims. Accordingly, the Applicants respectfully request withdrawal of this rejection.

Claims 1-2, 6, 10-11, 14, 15-16, and 23-27 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Kastan *et al.* (US 6,387,640 B1) in view of Zhang *et al.* (PNAS 94, pp. 8021-8026). The Applicants respectfully submit that these claims are not rendered obvious by the prior art of record.

With respect to Claim 1 and its dependent claims, the Applicants submit that the L3 limitation of allowable Claim 9 has been added to Claim 1. Accordingly, Claim 1 and all of its dependent claims are allowable for at least the same reasons.

With respect to Claim 23 and its dependent claims, the Applicants reiterate, as discussed above, that neither Kastan *et al.* nor Zhang *et al.* teaches a method for recombinantly producing functional ATM protein in vaccinia viral vectors, wherein "said functional ATM protein is produced at a level of greater than 2 μg substantially purified ATM protein per 8×10^6 host cells," as recited in Claim 23.

Claim 5 stands rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Kastan *et al.* (US 6,387,640 B1) and Rappold *et al.* (JCB Vol. 153(3), pp. 613-620), or Zhang *et al.* (PNAS 94, pp. 8021-8026) in view of Chakrabarti *et al.* (Biotechniques Vol 23 (6), pp 1094-1097). The Applicants submit that the L3 limitation of allowable Claim 9 has been added to Claim 1. Accordingly, Claim 1 and all of its dependent claims, including Claim 5, are allowable for at least the same reasons.

In view of the above, the Applicants respectfully request that the § 103 rejections be withdrawn and the pending claims allowed over the art of record.

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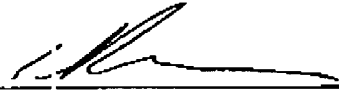
CONCLUSION

The Applicants have endeavored to address all of the Examiner's concerns as expressed in the outstanding Office Action. Accordingly, amendments to the claims, the reasons therefor, and arguments in support of the patentability of the pending claim set are presented above. Any claim amendments which are not specifically discussed in the above remarks are made in order to improve the clarity of claim language, to correct grammatical mistakes or ambiguities, and to otherwise improve the capacity of the claims to particularly and distinctly point out the invention to those of skill in the art.

In light of the above amendments and remarks, reconsideration and withdrawal of the outstanding rejections is respectfully requested. If the Examiner has any questions which may be answered by telephone, she is invited to call the undersigned directly.

Respectfully submitted,
KNOBBE, MARTENS, OLSON & BEAR, LLP

Dated: 6/3/04

By: 
Erik T. Anderson
Registration No. 52,559
Attorney of Record
2040 Main Street, Fourteenth Floor
Irvine CA 92614
(619) 35-8550

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